

Remarks

Applicants respectfully request reconsideration of the present application in view of the above amendments and following remarks. Claims 1 and 14 have been amended and claims 2, 10-13 and 15 have been cancelled without prejudice or disclaimer. No claims have been added. Therefore, claims 1, 3-9, 14, 16 and 17 are pending in the present application.

Claim 1 was in part amended to include the limitation from claim 2, which has been cancelled. Claim 14 has been amended to include the limitations from claim 15, which has been cancelled.

Claims 1-3 and 11-17 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2004/0053099 to Franklin et al. ("the Franklin reference"). Claims 2, 11-13 and 15 have been cancelled, therefore the rejection of these claims is moot. Applicants respectfully traverse the rejection to the remaining claims.

Amended claim 1 is directed to a method for forming a fuel cell assembly. The method comprising the steps of: a) forming a fuel cell sub-assembly module containing at least two bonded together fuel cell units, the at least two fuel cell units each including an anode, a cathode, and a membrane electrode assembly; b) testing the sub-assembly module; and c) joining together a plurality of sub-assembly modules to form the fuel cell assembly.

The Franklin reference does not teach or suggest a method of forming a fuel cell assembly including forming a fuel cell sub-assembly module containing at least

two bonded together fuel cell units, the at least two fuel cell units each including an anode, a cathode, and a membrane electrode assembly and joining together a plurality of sub-assembly modules to form the fuel cell assembly as recited in amended claim 1. As set forth in the previously filed response to Office Action, the Franklin reference discloses single fuel cell modules (units), each including a bipolar plate assembly, a membrane electrode assembly (MEA), and diffusion layers, which are manufactured as separate entities and assembled one by one to form a complete fuel cell stack. See *Franklin*, ¶¶ [0004], [0104] (defining a fuel cell module as being a single fuel cell unit). The term "integrated module" used in the Franklin reference is describing an individual fuel cell (containing one bipolar plate and one MEA), not a sub-assembly module containing a plurality of bonded together fuel cells. In fact, the Franklin reference refers to the term "module" as being "identical single interchangeable separable components containing the bipolar separable plate, membrane electrode assembly, separate diffusion layers (if used), gaskets (if used), manifolds, adhesives, and seals (if used) and comprises a single electrochemical cell." Franklin, ¶ [0104]. As such, the Franklin reference teaches nothing more than stacking the individual fuel cells (i.e., containing one bipolar plate and one MEA) on top of each other one by one to form a fuel cell stack. The Examiner has failed to provide any specific evidence to indicate that the Franklin reference discloses that the fuel cell units described therein are joined together to form a plurality of sub-assembly module, which is subsequently joined with one or more other sub-assembly modules to form the fuel cell assembly.

Furthermore, the Franklin reference does not teach or suggest a method of forming a fuel cell assembly including testing the sub-assembly module, the sub-assembly module containing at least two bonded together fuel cell units as recited in claim 1. Instead, the Franklin reference discloses that the individual fuel cell units (containing one bipolar plate and one MEA) are tested prior to directly assembling them into the fuel cell stack. See *Franklin*, Abstract. The Franklin reference does not disclose forming a sub-assembly module made up of two or more bonded together fuel cell units, let alone testing such a sub-assembly module.

For at least these reasons, the Franklin reference fails to teach all of the limitations included in claim 1. Applicants request that the rejection of claim 1 be withdrawn. As claim 3 depends from claim 1, Applicants request that the rejection of claim 3 be withdrawn for at least the same reasons that were set forth with respect to claim 1.

Amended claim 14 is directed to a fuel cell assembly comprising a plurality of fuel cells coupled together to form a plurality of fuel cell sub-assembly modules. The plurality of fuel cell sub-assembly modules are coupled together to form the fuel cell assembly, wherein at least one of the fuel cells includes a bipolar plate assembly and a membrane electrode assembly.

For reasons similar to those set forth with respect to claim 1, Applicants submit that the Franklin reference does not teach or suggest a fuel cell assembly including a plurality of fuel cells coupled together to form a plurality of fuel cell sub-assembly modules, wherein said plurality of fuel cell sub-assembly modules are coupled together to form said fuel cell assembly as recited in claim 14. Thus,

Applicants request that the rejection of claim 14 be withdrawn. As claims 16 and 17 depend from claim 14, Applicants request that the rejection of claims 16 and 17 be withdrawn for at least the same reason that was set forth with respect to claim 14.

Claims 4-10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Franklin reference in view of U.S. Publication No. 2004/0053100 to Stanley et al. ("the Stanley reference"), or U.S. Publication No. 2005/0091838 to Frank et al. ("the Frank reference"), or U.S. Patent No. 6,761,991 to Frisch et al. ("the Frisch reference"). Claim 10 has been cancelled, therefore the rejection of this claim is moot.

As stated above with respect to claim 1, the Franklin reference does not teach or suggest a method of forming a fuel cell assembly including forming a fuel cell sub-assembly module containing at least two bonded together fuel cell units, the at least two fuel cell units each including an anode, a cathode, and a membrane electrode assembly and joining together a plurality of sub-assembly modules to form the fuel cell assembly. In addition, the Franklin reference does not teach or suggest testing the sub-assembly module as recited in claim 1. The Stanley, Frank and Frisch references also fail to teach or suggest the limitation that was lacking in the Franklin reference. Since claims 4-9 depend from claim 1, Applicants request that the rejection of claims 4-9 be withdrawn for at least the same reasons that were set forth with respect to claim 1.

Dependant claim 4 depends from claim 1 and sets forth further steps for forming each of the sub-assembly modules. One of the additional steps set forth in claim 4 states that an alignment element engages one of the bipolar plate

assemblies. In the Final Office Action, the Examiner used the electrical contact shown in FIG. 9I, and described in paragraph [0084] of the Franklin reference, to teach the alignment element set forth in claim 4. The alignment element referred to by the Examiner is merely an alternative embodiment for the electrical contacts labeled as reference numeral (41) in FIG. 4B of the Franklin reference. In FIG. 4B, the electrical contact (41) resides between adjacent MEA's, not in engagement with a bipolar plate as recited in claim 4. See *Franklin*, ¶¶ [0068], [0084], [0110]. For this additional reason, Applicants request that the rejection of claim 4 be withdrawn.

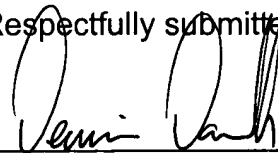
Conclusion

In light of the foregoing, Applicants submit that claims 1, 3-9, 14, 16 and 17 are in condition for allowance and such allowance is respectfully requested. Should the Examiner feel that any unresolved issues remain in this case, the undersigned may be contacted at the telephone number listed below to arrange for an issue resolving conference.

The Commissioner is hereby authorized to charge the \$120.00 fee for the one-month extension of time and any other fee that may have been overlooked to Deposit Account No. 10-0223.

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Respectfully submitted,



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